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Quarterly Report

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Korea, Quarterly Energy Report 2nd Quarter of 2001

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Report Highlights: Slackened economy and heightened oil price slow down energy demand growth continually. This sluggish trend became more sustaining in 1Q of 2001, which shows us just 1.7% total energy demand increase. Main factors causing this downturn trend are high oil prices and slackened economy. Even though oil prices have become relatively stable, Korean economy doesn't show any sign of recovery since industries like semiconductor and IT seem to be in a serious trouble.

The current discouraging factors are expected to exert severe impacts at least through the first half of 2001. Even though after the first half Korean economy and energy demand are expected to recover to normal levels as was suggested before, growth pace will be much more subdued than in the 1990s.

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1. Energy Demand (Consumption) in the 1st Quarter of 2001

With 192.7 million tonnage of oil equivalent (toe) as of 2000, Korea is the 10th largest energy consuming country in the world and imports 97 % of its energy resources. Oil accounts for more than 55 % of energy consumption, but lacking domestic reserves, Korea imports all of its crude oil. With daily consumption of 2.0 million barrels of oil, Korea rises to the seventh largest in the world in terms of oil consumption and the fourth largest in oil imports. In addition, Korea mainly imports liquefied natural gas (LNG) and is the second largest LNG importer. It is ranked eighth in the world in terms of energy consumption increase rate.

Trend of Energy Consumption

Classification	1999	2000					2001
		1/4	2/4	3/4	4/4	Annual	1/4
Primary Energy (1,000 toe)	181,363 (9.3)	51,554 (8.4)	45,046 (9.3)	45,184 (4.0)	50,890 (3.6)	192,674 (6.2)	52,432 (1.7)
Oil (1,000 bbl)	719,657 (7.4)	203,178 (4.1)	175,718 (8.7)	171,102 (0.3)	192,559 (0.1)	742,557 (3.2)	200,575 (-1.3)
LNG (1,000 ton)	12,962 (21.8)	5,136 (21.3)	2,597 (18.1)	2,337 (-7.4)	4,487 (12.1)	14,557 (12.3)	5,976 (16.4)
Coal (1,000 ton)	59,129 (5.8)	15,486 (8.8)	16,574 (13.4)	16,899 (14.6)	17,566 (13.0)	66,525 (12.5)	15,424 (-0.4)

(Source: the Korea Energy Economics Institute, Seoul, Korea)

Note) Numbers in parentheses are percentage growth rates (year-on-year).

Korea's primary energy consumption in the 1st quarter of 2001 recorded 52.4 million toe, which is approximately 1.7% increase from the same period of 2000. During the 1st quarter of 2001 alone, while the consumption on LNG and nuclear power increased by 16.4% and 4.1% respectively from the same period of 2000, the consumption on oil and bituminous coal reduced by 1.3% and 2.5% each.

Primary Energy Consumption in 1st Q. of 2001

Classification	March 2000	March 2001	1 st Quarter, 2000		1 st Quarter, 2001	
			Volume	Share (%)	Volume	Share (%)
Primary Energy: (1,000 toe)	17,173 (5.5)	17,164 (-0.1)	51,554 (8.4)	100.0	52,432 (1.7)	100.0
Petroleum (1,000 bbl)	67,716 (0.2)	66,448 (-1.9)	203,183 (4.1)	53.1	200,575 (-1.3)	51.6
LNG (1,000 ton)	1,483 (21.6)	1,774 (19.6)	5,136 (21.3)	13.0	5,976 (16.4)	14.8
Coal:						
Anthracite (1,000 ton)	516 (36.5)	677 (31.2)	1,421 (24.3)	1.3	1,714 (20.6)	1.7
Bituminous (1,000 ton)	5,086 (10.1)	4,621 (-9.1)	14,064 (7.4)	18.0	13,710 (-2.5)	17.3
Nuclear Power (GWh)	8,978 (11.5)	9,034 (0.6)	27,048 (16.7)	13.1	28,164 (4.1)	13.4
Hydro Power (GWh)	312 (-30.5)	222 (-28.8)	1,202 (6.0)	0.6	733 (-39.0)	0.3
Others (1,000 toe)	155 (6.1)	159 (2.6)	440 (6.1)	0.9	464 (5.5)	0.9

(Source: the Ministry of Commerce, Industry and Energy, Seoul, Korea)

Note) Numbers in parentheses are percentage growth rates (year-on-year).

Meanwhile, during the 1st quarter of 2001, while the final energy consumption in the industrial sector decreased by 0.2% from the same period of 2000, the consumption in the home and commercial sector increased by 4.9%. The final energy consumption in the transport sector increased by 0.7% in the 1st quarter of 2001, compared with the same period of last year.

Final Energy Consumption in 1st Q. of 2001

Classification	March 2000	March 2001	1 st Quarter, 2000		1 st Quarter, 2001	
			Volume	Share (%)	Volume	Share (%)
Final Energy: (1,000 toe)	13,799 (4.4)	13,878 (0.6)	41,569 (7.0)	100.0	42,192 (1.5)	100.0
Industrial	7,365 (7.9)	7,231 (-1.8)	20,980 (6.4)	50.5	20,934 (-0.2)	49.6
Transport	2,547 (-2.0)	2,642 (3.7)	7,158 (6.7)	17.2	7,211 (0.7)	17.1
Home/Commercial	3,629 (2.6)	3,752 (3.4)	12,600 (7.9)	30.3	13,223 (4.9)	31.3
Public and Others	259 (3.3)	253 (-2.3)	831 (9.4)	2.0	826 (-0.6)	2.0

(Source: the Ministry of Commerce, Industry and Energy, Seoul, Korea)

Note) Numbers in parentheses are percentage growth rates (year-on-year).

2. Energy Import (Supply) in the 1st Quarter of 2001

During 1st quarter of 2001, Korea's energy import reached \$ 10 billion, which is 7.8 % increase over the previous year. The growth in energy import is attributed to continuous increase in crude oil prices.

Compared with 1st quarter of 2000, the import of LNG in the 1st of quarter of 2001 increased by 35.9 %:

Korea's LNG Import

Classification	1 st Q of 2000	1 st Q of 2001
Volume (1,000 ton)	4,818 (22.2)	5,711 (18.5)
Value (\$ 1 mil.)	1,142 (121.7)	1,553 (35.9)
Unit Cost of Import (\$/ton)	237	272

(Source: the Ministry of Commerce, Industry and Energy, Seoul, Korea)

Note) Numbers in parentheses are percentage growth rates (year-on-year)

Korea's import of crude oil also increased to U\$ 6.3 billion in the 1st quarter of 2001, 4 % up from the same period of 2000:

Korea's Crude Oil Import

Classification	1 st Q of 2000	1 st Q of 2001
Volume (million bbl)	238 (1.9)	249.4 (4.8)
Value (\$ 1 mil.)	6,096 (133.7)	6,338 (4.0)
Unit Cost of Import (\$/bbl, CIF)	25.6 (129.3)	25.4 (-0.8)

(Source: the Ministry of Commerce, Industry and Energy, Seoul, Korea)

Note) Numbers in parentheses are percentage growth rates (year-on-year).

Korea's import of bituminous coal reached \$500 million in the 1st quarter of 2001, 3 % up from the 1st quarter of 2000:

Korea's Bituminous Coal Import

Classification	1 st Q of 2000	1 st Q of 2001
Volume (1, 000 tons)	14,227 (22.8)	14,809 (4.1)
Value (\$ 1 mil.)	487 (7.7)	502 (3.0)
Unit Cost of Import (\$/ton)	34	34

(Source: the Ministry of Commerce, Industry and Energy, Seoul, Korea)

Note) Numbers in parentheses are percentage growth rates (year-on-year).

Compared with the 1st quarter of 2000, Korea's energy import in the 1st quarter of 2001 can be summarized as follows:

- Energy Import in total: \$10 billion (7.8% up)
 - Crude Oil: \$ 6.3 billion (4% up)
 - LNG: \$1.6 billion (35.9% up)
 - Bituminous Coal: \$ 500 million (3% up)
- Energy Export (petrochemical): \$ 2.29 billion (8.7% up)
- Net Cost of Energy Import (Energy Import –Energy Export): \$ 7.7 billion (7.5% up)

Korea's Energy Import & Export: 1st Quarter of 2001

(Unit: \$ million, %)

Classification	1 Q of 2000		1 Q of 2001	
	Volume	Value	Volume	Value
Total Energy Import:	-	9,280 (115.1)	-	10,004 (7.8)
Petroleum (million bbl)	293.5 (5.2)	7,562 (132.5)	303.1 (3.3)	7,901 (4.5)
Crude Oil (million bbl)	238 (1.9)	6,096 (133.7)	249.4 (4.8)	6,338 (4.0)
Petroleum Products (million bbl)	55.5 (22.3)	1,466 (127.8)	53.7 (-3.3)	1,562 (6.6)
LNG (1,000 ton)	4,818 (22.2)	1,142 (121.7)	5,711 (18.5)	1,553 (35.9)
Anthracite Coal (1,000 ton)	376 (23.3)	14 (13.3)	688 (83.0)	24 (69.7)
Bituminous Coal	14,227 (22.8)	487 (7.7)	14,809 (4.1)	502 (3.0)
Fuel for Nuclear Plants	-	75 (-9.8))	-	25 (-66.3)
Petrochemical Export:	75.5 (2.1)	2,104 (115.8)	83.9 (11.1)	2,287 (8.7)

(Source: the Ministry of Commerce, Industry and Energy, Seoul, Korea)

Note) Numbers in parentheses are percentage growth rates (year-on-year).

3. Quarterly Energy Outlook for 2001

a) Overview

Slackened economy and heightened oil price slow down energy demand growth continually. At the glance of the trend of Korean total energy demand in 2000 revealed us how serious the impacts of high oil price and sluggish economy are. The growth rate of 8.9% in the first half fell to 3.8% in the second half. This sluggish trend became more sustaining in 1Q of 2001, which shows us just 1.7% total energy demand increase.

"Promoting a healthy economy and strong communities"

Main factors causing this downturn trend were high oil prices and slackened economy. Even though oil prices have become relatively stable, Korean economy doesn't show any sign of recovery since industries like semiconductor and IT seem to be in a serious trouble.

The current discouraging factors are expected to exert severe impacts at least through the first half of 2001. Even though after the first half Korean economy and energy demand are expected to recover to normal levels as was suggested before, growth pace will be much more subdued than in the 1990s.

Therefore, the forecasting results by KEEI (Korea Energy Economics Institute) show a moderate growth of 3.5% in energy demand for 2001. Relatively LNG and electricity demand will still have a substantial growing pattern, while relatively weak demand is expected for oil.

<Forecast Briefs>

Classification	1999	2000p					2001e
		1/4	2/4	3/4	4/4	Annual	Annual
Primary Energy (1000 TOE)	181,363 (9.3)	51,554 (8.4)	45,046 (9.3)	45,184 (4.0)	50,890 (3.6)	192,674 (6.2)	199,341 (3.5)
Oil (1000 bbl)	719,657 (7.4)	203,178 (4.1)	175,718 (8.7)	171,102 (0.3)	192,559 (0.1)	742,557 (3.2)	748,808 (0.8)
Coal (1000 ton)	59,129 (5.8)	15,486 (8.8)	16,574 (13.4)	16,899 (14.6)	17,566 (13.0)	66,525 (12.5)	69,780 (4.9)
LNG (1000 ton)	12,962 (21.8)	5,136 (21.3)	2,597 (18.1)	2,337 (-7.4)	4,487 (12.1)	14,557 (12.3)	17,006 (16.8)
Electricity (TWh)	214.2 (10.7)	58.4 (17.4)	57.9 (11.6)	62.4 (10.5)	60.8 (8.4)	239.5 (11.8)	257.4 (7.5)

(Source: the Korea Energy Economics Institute, Seoul, Korea)

Note: 2000 figures is to be finalized during the 3rd Quarter, 2001.

b) Trends

In the year 2000, total energy demand increased moderately at the rate of 6.2%. While in the first half of 2000, total energy demand continued 1999's strong growth (8.4% in 1Q, 9.3% in 2Q), in the second half, high oil prices and slackened economy affected the demand growth negatively (4.0% in 3Q, 3.6% in 4Q).

- Oil demand growth fell significantly from 8.7% in 2Q to 0.1% in 4Q, which was mostly driven by weak final sector demand and is attributed to rising oil prices and substitution to LNG in industrial sector.
- Energy demand composition ratio in 2000 showed increases in the shares of natural

gas and coal and a decrease in the share of oil.

In 2001 1Q, primary energy demand growth rate fell dramatically to 1.7% due to continuous high oil prices and recessive economy. The increasing rate of final energy demand was just 1.5%.

Final energy demand in 2000 grew solidly in the first half, but turned sluggish in second half, resulting a moderate annual growth rate of 4.6%.

- While industrial sector demand grew mildly at the rate of 4.7% and residential/commercial/public sector showed a low growth rate of 1.3% in 2000, transport sector revealed a relatively strong demand like 8.1% growth rate.

C) Forecast

In the year 2001, weak primary energy demand is projected to continue through the first half, and pick up its pace of growth only in the second half. Projected total demand is 199.3 million TOE or 3.5% growth.

- Oil demand is expected to be very weak since the impact of prolonged high oil price even after it is stabilized in 2001. However, oil demand in electricity sector is expected to be relatively high. Projected oil demand growth rate is 0.8%.
- LNG demand will be the continuous leader, especially through electricity demand increase for environmental improvements.

<Demand Trends and Forecasts: Primary Energy>

Classification	1999	2000p					2001e		
	Annual	1/4	2/4	3/4	4/4	Annual	1st	2nd	Annual
Coal (1000 ton)	59,129 (5.8)	15,486 (8.8)	16,574 (13.4)	16,899 (14.6)	17,566 (13.0)	66,525 (12.5)	33,007 (3.0)	36,773 (6.7)	69,780 (4.9)
Oil (1000 bbl)	719,657 (7.4)	203,178 (4.1)	175,718 (8.7)	171,102 (0.3)	192,559 (0.1)	742,557 (3.2)	371,976 (-1.8)	376,833 (3.6)	748,808 (0.8)
LNG (1000 ton)	12,962 (21.8)	5,136 (21.3)	2,597 (18.1)	2,337 (-7.4)	4,487 (12.1)	14,557 (12.3)	9,255 (19.7)	7,751 (13.6)	17,006 (16.8)
Hydro (GWh)	6,066 (-0.5)	1,202 (6.0)	1,130 (-28.9)	2,072 (8.5)	1,206 (-15.9)	5,610 (-7.5)	1,275 (-45.4)	3,419 (4.3)	4,694 (-16.3)
Nuclear (GWh)	103,064 (14.9)	27,047 (16.7)	25,467 (4.0)	28,630 (5.8)	27,820 (-1.9)	108,964 (5.7)	53,877 (2.6)	57,013 (1.0)	110,890 (1.8)
Others (1000 TOE)	1,806 (18.4)	440 (6.1)	478 (6.1)	458 (6.1)	541 (6.1)	1,917 (6.1)	972 (5.9)	1,066 (6.8)	2,038 (6.3)
Primary Energy (1000 TOE)	181363 (9.3)	51,554 (8.4)	45,046 (9.3)	45,184 (4.0)	50,890 (3.6)	192,674 (6.2)	98,351 (1.8)	100,990 (5.1)	199,341 (3.5)

(Source: the Korea Energy Economics Institute, Seoul, Korea)

Note) Numbers in parentheses are percentage growth rates (year-on-year).

p = preliminary, e = forecast estimates

For similar reasons final energy demand will grow at a moderate rate, reaching 153.1 million TOE from 149.6 million TOE of 2000:

- Weak demand in the second half of 2000 will continue across all final demand sectors, with 3.5% growth expected in residential & commercial sector and even lower growth in transport sector (3.0%) and industrial sector (1.6%).

- While oil products demand will grow negatively by 0.1%, bituminous coal will increase by 1.6%, electricity 7.5% and city gas demand 10.8%. - All the sectors will show low demand increase, specialty industry sector will lead the sluggish energy demand due to slow economy. Oil products demand continues to be weak, not recovering 1997 levels even in 2001.

<Demand Trends and Forecasts: Final Energy>

Classification	1999 Annual	2000p					2001e		
		1/4	2/4	3/4	4/4	Annual	1st	2nd	Annual
Industry (1000TOE)	79,858 (5.0)	20,955 (6.3)	20,503 (7.6)	20,246 (1.3)	21,916 (3.9)	83,620 (4.7)	41,364 (-0.2)	43,595 (3.4)	84,959 (1.6)
Transport (1000 TOE)	28,625 (9.3)	7,215 (7.6)	8,007 (16.2)	8,071 (5.7)	7,651 (3.5)	30,945 (8.1)	15,419 (1.3)	16,465 (4.7)	31,884 (3.0)
Residential/commercial/ Public (1000TOE)	34,577 (15.6)	13,174 (6.0)	6,769 (5.4)	5,583 (-3.1)	9,495 (-4.6)	35,021 (1.3)	20,409 (2.3)	15,830 (5.0)	36,239 (3.5)
Final Energy (1000 TOE)	143,060 (8.3)	41,345 (6.4)	35,279 (9.0)	33,901 (1.5)	39,062 (1.6)	149,586 (4.6)	77,192 (0.7)	75,890 (4.0)	153,082 (2.3)
City Gas (million m3)	10,012 (24.8)	4,871 (26.7)	2,406 (20.2)	1,425 (19.1)	3,261 (9.8)	11,963 (19.5)	7,961 (9.4)	5,289 (12.9)	13,250 (10.8)
Oil (1000 bbl)	689,445 (7.3)	191,711 (2.3)	165,308 (8.3)	161,426 (-2.2)	180,265 (-2.2)	698,709 (1.3)	347,612 (-2.6)	350,074 (2.5)	697,685 (-0.1)
Electricity (TWh)	214,215 (10.7)	58,391 (17.4)	57,911 (11.6)	62,431 (10.5)	60,802 (8.4)	239,535 (11.8)	124,870 (7.4)	132,553 (7.6)	257,423 (7.5)
Bituminous Coal (1000 ton)	25,840 (1.0)	6,310 (2.3)	6,844 (3.8)	6,794 (3.9)	7,077 (8.2)	27,024 (4.6)	13,397 (1.9)	14,050 (1.3)	27,447 (1.6)
Anthracite Coal (1000 ton)	2,440 (11.9)	723 (14.0)	641 (46.5)	680 (44.3)	1,303 (45.2)	3,346 (37.1)	1,791 (31.3)	2,069 (4.3)	3,859 (15.3)
Heat & Others (1000TOE)	2,806 (17.6)	958 (11.3)	635 (7.9)	520 (8.0)	921 (5.3)	3,035 (8.2)	1,690 (6.0)	1,542 (7.0)	3,231 (6.5)

(Source: the Korea Energy Economics Institute, Seoul, Korea)

Note) Numbers in parentheses are percentage growth rates (year-on-year) p = preliminary, e = forecast estimates

Attachments:

a. Korean Economy Update

Korea's economy, which has continued its downturn since the second half of 2000, now shows signs of picking up on the back of the improvement of internal and external economic conditions.

The real GDP during the first quarter of 2001 rose 3.7 percent year-on-year, posting a higher-than-expected growth rate. Despite the slowdown in domestic demand—such as consumer spending (0.9 percent), investment in construction (1.4 percent), and facility investment (-7.9 percent)-- exports maintained moderate growth. Manufacturing and service sector activity was brisk. In particular, the growth of the IT industry soared by 17.7 percent, an important contributor to the hike in the GDP.

On the downside, facility investment and construction orders received continued to decline, registering 5.1 percent and 27.2 percent drops, respectively. Output in the agricultural, forestry, and fishery sectors remained flat.

Several economic indexes reached consensus on recovery signs. The leading composite index, forecasting economic situations, edged up 0.2 percent for two successive months from February through March. Both the Consumer Survey Index and the Business Survey Index, which help forecast business prospects for the coming months, have been on a steady rise since January 2001.

As for consumption in March, wholesale and retail sales increased by 3.6 percent, while industrial output likewise rose 6.4 percent. The average operation ratio stood at 74.9 percent in March, the same as a month earlier.

The unemployment rate in April registered 3.8 percent, a full 1 percent drop from the preceding month. It was attributed to seasonal factors in the agricultural, forestry, and fishery sectors and an increase in demand for workers in the service sector. The number of jobless in April stood at 850,000, decreasing by 190,000 from a month earlier.

The financial market, which has been volatile due to the widening foreign exchange rate and the hike in interest rate, recovered somewhat in May. Corporate financing appeared to pick up, as more companies tapped corporate bonds and commercial paper. The corporate financing climate continues to improve, spurred by expanded bank credit to the corporate sector—in particular small-and medium-sized enterprises--and the increased issuance of corporate bonds.

(Source: the Ministry of Finance & Economy, Seoul, Korea)

b. Data: Korea's Import of Crude Oil from Alaska

Korea's Crude Oil Import from Alaska

(Unit: 1,000 Bbl, U\$1,000(FOB))

Co. Name	1999		2000	
	Volume	Value	Volume	Value
SK Co.	1,592	25,271	-	-
LG Caltex Oil Co.	8,771	120,733	4,560	108,272
Hyundai Oil Co.	1,603	26,285	1,281	30,332
Inchon Oil Co.	-	-	500	11,811
Total	11,966	172,289	6,341	150,415

(Source: Korea Petroleum Association)